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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/058,810 04/13/98 NEGELE

U 225/44173

IM62/0217
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EXAMINER

CHEN, V

ART UNIT

PAPER NUMBER

1773

DATE MAILED:

02/17/00

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Please find below and/or attached an Office communication concerning this application or
proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/058,810

Applicant(s)
NEGELE et al

Examiner
Vivian Chen

Group Art Unit
1773



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-27 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5, 6, 7

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is vague and indefinite because the substituents for R are not specified.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-17, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUGIO ET AL (US 4,496,695).

SUGIO ET AL discloses metal substrates coated with corrosion resistant curable coating compositions, paints and adhesives, said compositions comprising a polyfunctional maleimide-functionalized compound and other copolymerizable components such as epoxy resins, wherein the coating is applied to a substrate by applying the coating composition in the form of a solvent-

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based solution, followed by curing the coating at temperatures of 50-400°C or with radiation, wherein the coating composition can also contain additives such as catalysts and dispersants (columns 5-6; lines 63-68, col. 8; lines 40-48, col. 9; line 26, col. 10 to line 10, col. 11; lines 55-68, col. 11) as recited in claims 1-2, 4-5, 7-8, 11-12, 14-17, 27. However, the reference does not explicitly disclose the recited thickness or pre-coating steps.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the thickness of the coating layer disclosed in SUGIO ET AL as indicated in claim 6 depending on the adhesive and mechanical properties required by a given usage. It is well known in the art to pre-clean metal substrates prior to coating as indicated in claim 7 in order to improve the adhesion of subsequently applied coatings. It would have been obvious to utilize conventional types of coating solutions such as dispersions or emulsions as indicated in claims 9-10 and to adjust the concentration of the coating composition in such solutions as indicated in claim 13 depending on the specific coating method and apparatus used.

4. Claims 1, 3, 6-10, 12-13, 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'ALELIO (US B 4,118,377).

D'ALELIO discloses metal substrates coated with corrosion resistant curable coating compositions, said compositions comprising a maleimide-functionalized oligomeric compound (lines) as recited in claims 1,3, wherein the coating is applied to a substrate by applying the coating composition in the form of a solvent-based solution, followed by curing the coating using

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heat, wherein a further topcoat can be applied over the coating layer and wherein the substrate can be aluminum and/or automotive components (columns 3-4; line 25, col. 9 to line 65, col. 10) as recited in claims 1, 3, 7-8, 12, 23-27. However, the reference does not explicitly disclose the recited thickness or pre-coating steps.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the thickness of the coating composition disclosed in D'ALELIO as indicated in claim 6 depending on the adhesive and mechanical properties required by a given usage. It is well known in the art to pre-clean metal substrates prior to coating as indicated in claim 7 in order to improve the adhesion of subsequently applied coatings. It would have been obvious to utilize conventional types of coating solutions such as dispersions or emulsions as indicated in claims 9-10 and to adjust the concentration of the coating composition in such solutions as indicated in claim 13 depending on the specific coating method and apparatus used.

5. Claims 1-2, 4, 7-10, 12-22, 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIENERT ET AL (US 5,084,304).

LIENERT ET AL discloses metal substrates coated with corrosion resistant curable coating compositions, said compositions comprising a polyfunctional bismaleimide compound, wherein the coating is applied to a substrate by first applying an optional primer coating in solution form, curing the optional primer coat, followed by the application of the bismaleimide-containing coating composition in the form of a solvent-based solution and the curing the said

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bismaleimide-containing coating at typical temperatures of 200-350°C to form a layer having a typical thickness of 4-23 μm , wherein the coating composition can also contain additives such as catalysts and wherein the substrate can be aluminum and/or automotive components (lines 13-35, col. 2; line 22, col. 10 to line 22, col. 11; lines 36-41, col. 11; line 50, col. 11 to line 30, col. 12) as recited in claims 1-2, 4, 6, 7-8, 12, 14, 16-19, 21, 24-27. However, the reference does not explicitly disclose the recited thickness or pre-coating steps.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use convention substrate treatment steps such as pre-cleaning metal substrates prior to applying coating layer disclosed in LIENERT ET AL as indicated in claim 7 in order to improve the adhesion of the coatings. It would have been obvious to utilize conventional types of coating solutions such as dispersions or emulsions as indicated in claims 9-10 and to adjust the concentration of the coating composition in such solutions as indicated in claims 13, 20 depending on the specific coating method and apparatus used. One of ordinary skill in the art would have utilized conventional additives such as dispersants as indicated in claim 15 in order to improve the coating characteristics and uniformity of the disclosed composition.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EUROPEAN PATENT APPLICATION 0 357 110 A1 and WILSON, JR. ET AL (US. 4,904,360) and WILSON, JR ET AL (US 5,034,279) disclose coating compositions containing bis-maleimides.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (703) 305-3551. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Paul Thibodeau, can be reached on (703) 308-2367.

For Art Unit 1773, the fax phone numbers are as follows:

official faxes:

(703) 305-3601

(703) 305-7718

unofficial faxes:

(703) 305-5436

(703) 305-3602

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (703) 308-0661.

VC

February 14, 2000



Vivian Chen
Primary Examiner
Group 1700